Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Appropriate selection of convalescent plasma donors for COVID-19

We read with considerable interest the Comment from Long Chen and colleagues[1] about the potential use of convalescent plasma for the treatment of COVID-19. Chen and colleagues mention the earlier pragmatic WHO recommendation for the use of convalescent plasma as therapy in Ebola virus disease.[2] The absence of a clinically relevant therapeutic benefit in patients with Ebola virus infection described by Griensven and colleagues,[3] and more recently the finding of no therapeutic benefit in a small trial in patients with COVID-19 in Zhengzhou, China,[4] will be used to question the usefulness of convalescent plasma in COVID-19. In the Guinea-Bissau Ebola study,[3] no attempt was made to select donors for the potency of their neutralising antibody. In the COVID-19 study,[4] seropositive donors were recruited only after IgM antibody to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was no longer detected, and no attempt to quantify the antibody response was reported. We previously described the levels of detectable antibody and the inferred level of neutralising antibody in convalescent plasma donors for patients with Ebola virus disease in Sierra Leone,[5] showing 100-fold differences in the level of neutralising antibody. We described a strategy for selecting donors with the highest levels of neutralising antibody, which was not undertaken in donors in the Guinea-Bissau or Zhengzhou studies. For planned interventions in the treatment of patients with COVID-19 severe disease, we strongly recommend selection and qualification only of donors who carry the highest levels of detectable neutralising antibody to SARS-CoV-2. In this respect, we have data which indicate that quantification of specific antibody to the receptor-binding domain will indicate levels of neutralising antibody (unpublished). Commercial assays based on the receptor-binding domain alone, although not intended for the purpose of identifying suitable convalescent plasma donors, will probably be able to serve this need.

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